

## REMARKS

This is intended as a full and complete response to the Final Office Action dated June 11, 2007, having a shortened statutory period for response set to expire on September 11, 2007. Please reconsider the claims pending in the application for reasons discussed below.

### ***Claim Rejections - 35 U.S.C. § 112***

Claims 23 and 24 stand rejected under 35 U.S.C. § 112, first paragraph. In response, Applicants have canceled these claims, without prejudice. Accordingly, Applicants respectfully request withdrawal of the rejection.

### ***Claim Rejections - 35 U.S.C. § 102***

Claims 11-14, 19, 20, 23 and 24 stand rejected under 35 U.S.C. 102(e) as being anticipated by US 2003/0119107 (*Dang et al.*). In response, Applicants respectfully traverse the rejection.

The Examiner misinterprets the cited passages of *Dang et al.* The particular citations in *Dang et al.* that are made by the Examiner specifically refer to embryonic stem (ES) cells and not embryonic bodies (EBs), as set forth in the rejection. When properly construed, the cited portions of *Dang et al.* fail to teach, show or suggest "casting the embryoid bodies in a three-dimensional scaffolding material and a cell culture medium, wherein the three-dimensional scaffolding material is a gel; and growing the embryoid bodies embedded in the three-dimensional scaffolding material and in the cell culture medium, thereby inducing differentiation of the embryoid bodies to produce populations of fibroblasts while embedded in the three-dimensional scaffolding material," as recited in claim 11.

Embryonic stem cells as taught in *Dang, et al.* are grown within agarose capsules to form embryoid bodies that emerge from the capsules (paragraph 160). Lack of influence on differentiation of the embryoid bodies formed as described in *Dang, et al.* enables generation of various cell populations other than fibroblasts, such as illustrated by Example 3 in *Dang, et al.* This "normal differentiation" of embryonic stem cells as

described in paragraph [0160] makes processes in *Dang, et al.* useful for all the various cell populations depending on, for example, conditions under which the embryonic stem cells are cultured as described in paragraph [0076]. Thus, *Dang, et al.* only teaches one way to grow stem cells to form embryoid bodies and does not teach subsequent embryoid body differentiation using embryoid body growth while embedded in a three-dimensional scaffolding material to induce differentiation and produce populations of fibroblasts.

Therefore, *Dang, et al.* fails to teach, show or suggest each and every limitation of claim 11. Further, Applicants submit that claim 11 and all claims dependent thereon are not anticipated by *Dang, et al.* and are patentable. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 11-14, 19 and 20.

#### ***Claim Rejections - 35 U.S.C. § 103***

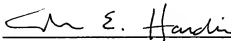
Claims 11-20, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2003/0119107 (*Dang et al.*) taken with *Dani et al.* ["Differentiation of embryonic stem cells into adipocytes in vitro" Journal of Cell Science (1997), 110: 1279-1285] and US 6,576,464 (*Gold et al.*). In response, Applicants respectfully traverse the rejection.

As stated above regarding the § 102 rejection, *Dang, et al.* does not teach, show or suggest "casting the embryoid bodies in a three-dimensional scaffolding material and a cell culture medium, wherein the three-dimensional scaffolding material is a gel; and growing the embryoid bodies embedded in the three-dimensional scaffolding material and in the cell culture medium, thereby inducing differentiation of the embryoid bodies to produce populations of fibroblasts while embedded in the three-dimensional scaffolding material," as recited in claim 11. Further, *Dani, et al.* and *Gold, et al.* fail to overcome this deficiency in *Dang, et al.* Therefore, *Dang, et al.* in view of *Dani, et al.* and *Gold, et al.* cannot render claim 11 obvious. Applicants submit that claim 11 and claims 12-20 dependent thereon are allowable and request withdrawal of the rejection and allowance of these claims.

**Conclusion**

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



---

Chance E. Hardie  
Registration No. 55,247  
PATTERSON & SHERIDAN, L.L.P.  
3040 Post Oak Blvd. Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for Applicant(s)